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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,319	08/01/2003	James W. Clark	KCX-458-DIV (17468.1)	5224
22827	7590	07/14/2006	EXAMINER	
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			FORTUNA, JOSE A	
			ART UNIT	PAPER NUMBER
			1731	
DATE MAILED: 07/14/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/632,319	CLARK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	José A. Fortuna	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 25-31 and 33-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-31 and 33-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: on page 23, line 15 and page 25, line 2, the Patent Number 5,204,703 does not correspond to the disclosed inventors.

It should be US Patent No. 5,284,703

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 25-31 and 33-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suskind et al., US Patent No. 4,929,498.

Suskind et al. teaches a wet wiper in which an antimicrobial solution is added to the pulp/fibers and the agent becomes substantive to the fibers, see abstract. The fibers in combination with non-treated fibers are formed into a treated paper. The web is formed using wet laid techniques and the fibers retain the antimicrobial agent, since they becomes substantive to the fibers, see column 3, lines 6-47 and example 1. Suskind et al. also teach the use of organosilicone quaternary ammonium compound such as the ones claimed, see column 3, line 49 through column 4, line 53. The amount of antimicrobial agent in the product is within the claimed range, see column 5, lines 40-58 and Suskind et al. teach also the hydroentangling of the cellulosic fibers with synthetic fibers, spunbond, see column 2, lines 10-46.

Suskind et al. teach the combination by hydroentangling of the pulp with textile fabrics, i.e. spunbonded, needle, punched and hydroentangled fabrics. Suskind et al., clearly teach that an antimicrobial wiper can be made without binder by hydroentangling, see column 2, lines 35-40. As one of ordinary skill in the art would recognize the making of a wiper by hydroentangling is done by the binding of a cellulosic web with a continuous filament fabric using hydraulic entanglement, see for example Suskind et al., US Patent No. 4,808,467, column 1, lines 48-68, attached as evidence. Suskind et al. clearly teach that they used 10-50%, because the microorganisms killing does not change considerably if more antimicrobial agent is used, i.e., the benefits of adding more antimicrobial agent, i.e., more than the suggested range, would be

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nominal. This clearly indicates that one can use more, but that the microorganisms killing would not increase to a range that would be economical, but it does not teach away from using the agent at higher rates, i.e., within the claimed range. Therefore, using an amount of antimicrobial fibers to make the hydroentangled fabric would have been obvious to one of ordinary skill in the art albeit with similar killing rate.

As to the covalent bonding of the fibers, Suskind teach that the organosilicone compound is fixed to the fibers, i.e., substantive to the fibers, see for example the abstract, that implies that the substance is bonded to the fibers. Furthermore, the paragraph bridging pages 8 and 9 of the present application, discloses that the bonding is formed by the addition of the organosilicone to the pulp fibers and the drying of such fibers, i.e., occurs under those conditions, and Suskind et al., teach the same organosilicone added to a pulp which is then dried to make a paper, which implies that the fixing of the antimicrobial compound on the fibers is by the same bonding, i.e. covalent bonding.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 25-31 and 33-52 have been considered but are moot in view of the new ground(s) of rejection.

The examiner would like to point out that the arguments with regard to the unexpected results in the percentage of killing of microorganisms were convincing for the following reasons:

- The scope of the claims is broader than the arguments. The examples of the present invention, Tables I and II, teach two important things:

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- i. The only used antimicrobial agent is AEM 5772 which is a specific organosilicone quaternary ammonium agent and no evidence has been presented which would cover the whole gamut of organosilicone quaternary ammonium agents as claimed. Evidence as to unexpected results must be “clear and convincing”, and be of scope reasonably commensurable with the scope of the subject matter claimed. *In re Lohr*, 137 USPQ 548 (CCPA 1963) and *in re Linder*, 173 USPQ 356 (CCPA 1972).
- ii. The percent killing that applicants argument, i.e., greater than 97%, only occurs at add-on rate between 0.23, (Table II) and 0.58%, (Table I), for lower values, i.e., 0.04 and 0.07 the killing rate are within the levels taught by the cited reference, Suskind et al.
- It is has not been proved that the rate of killing in both, the application and the cited reference, are in the same base, i.e., Suskind et al teach rate of killing measure within the first 8 hours and 3-log kill increase after 48 hours, see column 7, lines 9-19. In order to compare the wipers the results must be presented under the same base, and this has not been done or at least has not been explicitly discussed.

### ***Conclusion***


1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure in the Art of “Antimicrobial Fabrics.”

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to José A. Fortuna whose telephone number is 571-272-1188. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
José A Fortuna  
Primary Examiner  
Art Unit 1731

JAF